

# Ventura Beaches Bacteria

Kiddie Beach, Hobie Beach, and Harbor Cove Beach  
**Total Maximum Daily Load**



California Regional Water Quality Board, Los Angeles Region

# Ventura Beaches Bacteria TMDL

## Kiddie and Hobie Beach



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# Ventura Beaches Bacteria TMDL

## Ventura Harbor



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# Ventura Beaches Bacteria TMDL

## *TMDL Components*

- Adopting Resolution
- Basin Plan Amendment
  - TMDL elements in brief form
- CEQA Document
- Staff Report
  - TMDL elements

# Numeric Objectives

Indicator	Geometric Mean	Single Sample
Total Coliform	1000 cells/100 ml	10,000cells/100 ml
if Fecal/Total > 0.1		1000 cells/100 ml
Fecal Coliform( <i>E. coli</i> )	200 cells/100 ml	400 cells/100 ml
Enterococcus	35 cells/100 ml	104 cells/100 ml

# Existing Data Sources

- VCEHD data
- City of Ventura Harbor data
- VCWPD rainfall data

# Ventura Beaches Bacteria TMDL

## *Problem Statement*

### Single Sample Exceedances

Summer Dry Weather		
Site	April 1999 - October 2005 (7 Summers/49 Months)	April 2003 - October 2005 (3 Summers/21 Months)
	Exceedance Percentage (Exceedance Day/Total Days)	Exceedance Percentage (Exceedance Day/Total Days)
Peninsula Beach (Harbor Cove) –VCEH	<b>4.57% (10/219)</b>	<b>3.3% (3/91)</b>
Peninsula Beach (Harbor Cove) –VPW	<b>5.88% (11/187)</b>	<b>9.09% (7/77)</b>
Channel Islands Harbor Beach (Kiddie Beach)	<b>14.40% (160/1111)</b>	<b>10.34% (49/474)</b>
Hobie Beach	<b>24.07% (65/270)</b>	<b>12.79% (11/86)</b>
Leo Carrillo Beach	<b>0.00%</b>	

### Geometric Mean Exceedances

Summer Weather		
Site	April 1999 – October 2005 (7 Summers/49 Months)	April 2003 - October 2005 (3 Summers/21 Months)
	Exceedance Percentage (Exceedance Day/Total Days)	Exceedance Percentage (Exceedance Day/Total Days)
Peninsula Beach (Harbor Cove) –VCEH	<b>5.00% (11/220)</b>	<b>6.45% (6/93)</b>
Peninsula Beach (Harbor Cove) -VPW	<b>10.82% (21/194)</b>	<b>16.25% (13/80)</b>
Channel Islands Harbor Beach (Kiddie Beach)	<b>19.78% (71/359)</b>	<b>15.98% (27/169)</b>
Hobie Beach	<b>29.33% (66/225)</b>	<b>12.36% (11/89)</b>
Leo Carrillo Beach	<b>0.00%</b>	

VCEH= County of Ventura, Environmental Health Monitoring Data

VPW= City of Ventura, Public Works Monitoring Data

# Ventura Beaches Bacteria TMDL

## *Problem Statement*

### Single Sample Exceedances

SUMMER DRY WEATHER								
Site	April 1999 - October 2005 (7 Summers/49 Months)				April 2003 - October 2005 (3 Summers/21 Months)			
	Exceedance Percentage (Exceedance Day/Total Days)				Exceedance Percentage (Exceedance Day/Total Days)			
	Total Coliform	Fecal Coliform	Enterococcus	Fecal Coliform to Total Coliform Ratio	Total Coliform	Fecal Coliform	Enterococcus	Fecal Coliform to Total Coliform Ratio
Peninsula Beach (Harbor Cove) -VCEH	<b>0.46%</b> <b>(1/219)</b>	<b>1.37%</b> <b>(3/219)</b>	<b>2.28%</b> <b>(5/219)</b>	<b>2.28%</b> <b>(5/219)</b>	<b>1.10%</b> <b>(1/91)</b>	<b>1.10%</b> <b>(1/91)</b>	<b>1.10%</b> <b>(1/91)</b>	<b>1.10%</b> <b>(1/91)</b>
Peninsula Beach (Harbor Cove) -VPW	<b>2.67%</b> <b>(5/187)</b>	<b>0.00%</b> <b>(0/187)</b>	<b>3.81%</b> <b>(4/105)</b>	<b>0.53%</b> <b>(1/187)</b>	<b>5.19%</b> <b>(4/77)</b>	<b>0.00%</b> <b>(0/105)</b>	<b>2.60%</b> <b>(2/77)</b>	<b>1.30%</b> <b>(1/77)</b>
Channel Islands Harbor Beach (Kiddie Beach)	<b>1.17%</b> <b>(13/1111)</b>	<b>5.85%</b> <b>(65/1111)</b>	<b>11.25%</b> <b>(125/1111)</b>	<b>5.04%</b> <b>(56/1111)</b>	<b>1.90%</b> <b>(9/474)</b>	<b>2.53%</b> <b>12/474)</b>	<b>7.81%</b> <b>(37/474)</b>	<b>2.11%</b> <b>(10/474)</b>
Hobie Beach	<b>1.11%</b> <b>(3/270)</b>	<b>10.74%</b> <b>(29/270)</b>	<b>21.11%</b> <b>(57/270)</b>	<b>8.89%</b> <b>(24/270)</b>	<b>0.00%</b> <b>(0/86)</b>	<b>6.98%</b> <b>(6/86)</b>	<b>9.30%</b> <b>(8/86)</b>	<b>6.98%</b> <b>(6/86)</b>

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# Ventura Beaches Bacteria TMDL

## *Problem Statement*

### Single Sample Exceedances

Winter Dry Weather		
Site	November 1999 – March 2006 (7 Winters/35 Months)	November 2003 – March 2006 (3 Winters/15 Months)
	Exceedance Percentage (Exceedance Day/Total Days)	Exceedance Percentage (Exceedance Day/Total Days)
Peninsula Beach (Harbor Cove) -VCEH	<b>9.17% (11/120)</b>	<b>9.30% (4/43)</b>
Peninsula Beach (Harbor Cove) -VPW	<b>0.00% (0/22)</b>	<b>0.00% (0/5)</b>
Channel Islands Harbor Beach (Kiddie Beach)	<b>27.36% (119/435)</b>	<b>27.27% (33/121)</b>
Hobie Beach	<b>33.68% (32/95)</b>	<b>20.45% (9/44)</b>
Leo Carrillo Beach	<b>3.00%</b>	

### Geometric Mean Exceedances

Winter Weather		
Site	November 1999 – March 2006 (7 Winters/35 Months)	November 2003 – March 2006 (3 Winters/15 Months)
	Exceedance Percentage (Exceedance Day/Total Days)	Exceedance Percentage (Exceedance Day/Total Days)
Peninsula Beach (Harbor Cove) -VCEH	<b>27.39% (43/157)</b>	<b>20.31% (13/64)</b>
Peninsula Beach (Harbor Cove) -VPW	<b>N/A</b>	<b>N/A</b>
Channel Islands Harbor Beach (Kiddie Beach)	<b>46.83% (96/205)</b>	<b>38.04% (31/81)</b>
Hobie Beach	<b>41.90% (44/105)</b>	<b>25.42% (15/59)</b>
Leo Carrillo Beach	<b>0.00%</b>	

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# Ventura Beaches Bacteria TMDL

## *Problem Statement*

### Single Sample Exceedances

WINTER DRY WEATHER								
Site	November 1999 – March 2006 (7 Winters/35 Months)				November 2003 – March 2006 (3 Winters/15 Months)			
	Exceedance Percentage (Exceedance Day/Total Days)				Exceedance Percentage (Exceedance Day/Total Days)			
	Total Coliform	Fecal Coliform	Enterococcus	Fecal Coliform to Total Coliform Ratio	Total Coliform	Fecal Coliform	Enterococcus	Fecal Coliform to Total Coliform Ratio
Peninsula Beach (Harbor Cove) -VCEH	<b>0.83%</b> <b>(1/120)</b>	<b>0.00%</b> <b>(0/120)</b>	<b>8.33%</b> <b>(10/120)</b>	<b>0.00%</b> <b>(0/120)</b>	<b>2.33%</b> <b>(1/43)</b>	<b>0.00%</b> <b>(0/43)</b>	<b>6.98%</b> <b>(3/43)</b>	<b>0.00%</b> <b>(0/43)</b>
Peninsula Beach (Harbor Cove) -VPW	<b>0.00%</b> <b>(0/22)</b>	<b>0.00%</b> <b>(0/22)</b>	<b>0.00%</b> <b>(0/22)</b>	<b>0.00%</b> <b>(0/22)</b>	<b>0.00%</b> <b>(0/5)</b>	<b>0.00%</b> <b>(0/5)</b>	<b>0.00%</b> <b>(0/5)</b>	<b>0.00%</b> <b>(0/5)</b>
Channel Islands Harbor Beach (Kiddie Beach)	<b>0.69%</b> <b>(3/435)</b>	<b>8.74%</b> <b>(38/435)</b>	<b>24.37%</b> <b>(106/435)</b>	<b>7.36%</b> <b>(32/435)</b>	<b>0.00%</b> <b>(0/121)</b>	<b>4.13%</b> <b>(5/121)</b>	<b>25.62%</b> <b>(31/121)</b>	<b>4.96%</b> <b>(6/121)</b>
Hobie Beach	<b>3.16%</b> <b>(3/95)</b>	<b>17.89%</b> <b>(17/95)</b>	<b>32.63%</b> <b>(31/95)</b>	<b>12.63%</b> <b>(12/95)</b>	<b>2.27%</b> <b>(1/44)</b>	<b>6.82%</b> <b>(3/44)</b>	<b>20.45%</b> <b>(9/44)</b>	<b>6.82%</b> <b>(3/44)</b>

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# Ventura Beaches Bacteria TMDL

## *Problem Statement*

### Single Sample Exceedances

Wet Weather		
Site	April 1999 - March 2006 (7years/84 Months)	April 2003 - March 2006 (3years/36 Months)
	Exceedance Percentage (Exceedance Day/Total Days)	Exceedance Percentage (Exceedance Day/Total Days)
Peninsula Beach (Harbor Cove) -VCEH	<b>45.59% (31/68)</b>	<b>36.67% (11/30)</b>
Peninsula Beach (Harbor Cove) -VPW	<b>33.33% (7/21)</b>	<b>38.46% (5/13)</b>
Channel Islands Harbor Beach (Kiddie Beach)	<b>47.45% (93/196)</b>	<b>35.71% (25/70)</b>
Hobie Beach	<b>40.00% (16/40)</b>	<b>27.78% (5/18)</b>
Leo Carrillo Beach	<b>22.00%</b>	

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# Ventura Beaches Bacteria TMDL

## *Problem Statement*

### Single Sample Exceedances

WET WEATHER								
Site	April 1999 – March 2006 (7 Years/84 Months)				April 2003 – March 2006 (3 Years/36 Months)			
	Exceedance Percentage (Exceedance Day/Total Days)				Exceedance Percentage (Exceedance Day/Total Days)			
	Total Coliform	Fecal Coliform	Enterococcus	Fecal Coliform to Total Coliform Ratio	Total Coliform	Fecal Coliform	Enterococcus	Fecal Coliform to Total Coliform Ratio
Peninsula Beach (Harbor Cove) -VCEH	25.00% (17/68)	14.71% (10/68)	39.71% (27/68)	2.94% (2/68)	30.00% (9/30)	10.00% (3/30)	30.00% (9/30)	3.33% (1/30)
Peninsula Beach (Harbor Cove) -VPW	19.05% (4/21)	4.76% (1/21)	0.00% (0/21)	4.76% (1/21)	15.38% (2/13)	0.00% (0/13)	0.00% (0/12)	0.00% (0/13)
Channel Islands Harbor Beach (Kiddie Beach)	20.92% (41/196)	18.88% (37/196)	43.37% (85/196)	10.71% (21/196)	17.14% (12/70)	21.43% (15/70)	32.86% (23/70)	14.29% (10/70)
Hobie Beach	12.50 (5/40)	25.00% (10/40)	37.50% (15/40)	12.50% (5/40)	5.56% (1/18)	11.11% (2/18)	27.78% (5/18)	5.56% (1/18)

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# Ventura Beaches Bacteria TMDL

Channel Islands Harbor Beaches

## *Sources*

- Contributions of Harbor Waters
  - Harbor Dept sampling and VCEHD sampling*
  - Storm Drains
  - Marina Activities
    - dock wash down
    - boat sewage discharges

# Ventura Beaches Bacteria TMDL

Channel Islands Harbor Beaches

## *Sources*

- Contributions of Local Sources
  - Birds and other wildlife
  - Local sanitary sewer or storm drain links

# Ventura Beaches Bacteria TMDL

## Harbor Cove Beach

### *Sources*

- Contributions of Harbor Waters
  - City of Ventura Harbor Sampling*
    - Storm Drains
    - Arundell Barranca
    - Marina Activities
      - dock wash down
      - boat sewage discharges

# Ventura Beaches Bacteria TMDL

Harbor Cove Beach

## *Sources*

- Contributions of Local Sources
  - Birds and other wildlife
  - Storm drain links

# Reference Beach Approach

Reference Beach Approach

*not a simple application of standards*

*not a “natural source exclusion”*

- No geometric mean exceedances
- Some single sample exceedances
- Separate targets for wet and dry weather

- Signs



# Existing Measures

- Animal waste disposal mitt dispenser
- Trashcan Lids



# Implementation Plans

- Responsible Parties
- Monitoring
- Allocations and interim allocations
- Special Studies
- Actions
  - BMPs
  - Infrastructure projects

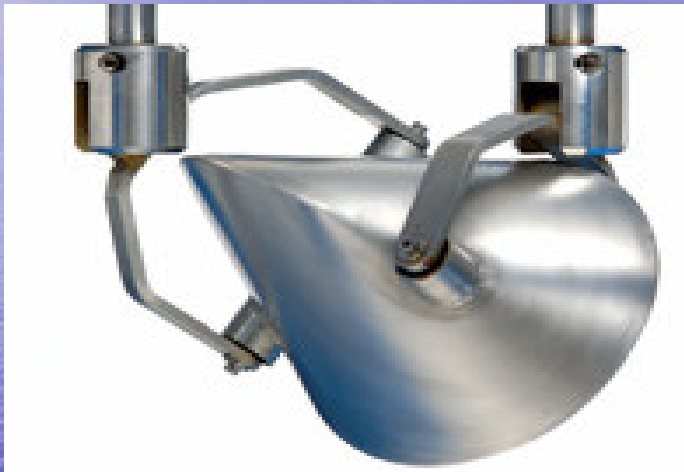
# BMPs

- Bird Excluders



# BMPs

- Oloids from West Technology Systems Inc.
  - ½ HP motors



# BMPs



# Tentative Implementation Plan for Ventura Beaches

- Responsible Parties
  - City of Oxnard
  - City of Ventura
  - Ventura Port District
  - County of Ventura
- As of TMDL Approval
  - no increase of exceedance days (interim allocation)
  - monitoring program
- (one to two years)
  - completion of any special studies
- (three to four years)
  - reassessments if necessary
- (Dependent on required implementation actions)
  - meet all targets

# Schedule-RWQCB with Stakeholder input

- CEQA Scoping Meeting
- Draft Staff Report, Draft Resolution, CEQA Document
  - stakeholder comment period (45 days)
- Regional Board Adoption
- State Board Approval
- OAL Approval
- EPA Approval

# Contacts

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